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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Nobuyuki Nonaka

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EXAMINER

SHAH, MILAP

ART UNIT

PAPER NUMBER

3714

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/697,947	<b>Applicant(s)</b> NONAKA, NOBUYUKI	
	<b>Examiner</b> Milap Shah	<b>Art Unit</b> 3714	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is in response to the amendment received on March 13, 2008. The Examiner acknowledges that claims 6 & 8 were amended, no claims were canceled, and claims 13 & 14 were added. Therefore, claims 6-14 are currently pending.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-12 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 6 & 8, as amended, adds the following limitation: "...a distance d from the first and second pixels...". However, it is unclear as between which two points this distance is referring to. Clearly it recites distance d from, thus it cannot reasonably be interpreted that distance d is the distance between the first and second pixels (i.e. that particular distance is the "pitch"). Therefore, it is vague as to what measured distance is distance d. The specification appears to indicate distance d is a distance between the gaming machine and the game player. Thus, it is requested the Applicant clarify the claimed invention to indicate the distance d is from the first and second pixels to a player of the gaming machine (or similar language). Currently, where exactly the distance d is measured is indefinite. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. (U.S. Patent Application Publication No. 2003/0016318).

**Examiner Note:** See Examiner note in previous action dated October 10, 2007.

**Claims 6, 8, 13, & 14:** Liang et al. disclose the invention substantially as claimed including a display unit having a plurality of pixels arranged in a matrix extending in an x direction and a y direction perpendicular to the x direction to form an xy plane (figure 3 or 5), each pixel including a first pixel unit and a second pixel unit disposed adjacent to the first pixel unit (figure 3, see a single pixel unit is made up of two sub-pixels or what is considered a first pixel unit and second pixel unit adjacent to the first pixel unit; see a similar layout in figure 5), each one of the first and second pixels units having a first pixel electrode operative to display a first color and a second pixel electrode operative to display a second color different from the first color with the first and second pixel electrodes being arranged in a serial manner relative to each other in an identical manner for each pixel (clearly seen in figure 3 or 5, where in figure 3 three pixel electrodes are used for the three colors of each pixel unit, and figure 5 two pixel electrodes are used for the two colors of each pixel unit; also note the electrodes are arranged in a serial manner across and an identical manner for each pixel), wherein, when at least one pixel is emerged, the same-color pixel electrodes of the at least one pixel are emerged simultaneously (paragraphs 0017 & 0020-0021). Liang et al. also disclose gate lines (figure 3[scan lines 46]) wired in the x direction and connected to a scanning signal driver and information lines (figure 3[transmission lines 48]) wired in the y direction and connected to an information signal driver, wherein the game lines and the information lines are orthogonal in condition of being insulated mutually (figures 3-4 and column 3, lines 16-35, such that the scan lines in the x direction are inherently orthogonal to the transmission lines in the y direction at least based on figure 3; see also figure 4 which shows the lines are insulated mutually).

Liang et al. appear to explicitly lack disclosing the claimed ranges of 5 to 35 pixel lines per degree and a pitch of between 0.075mm and 1.396mm. Liang et al. further lack an explicit disclosure of the pitch between the first and second pixel units and a distance  $d$  from the first and second pixel units [to the game player] satisfy the relation that  $P < \tan(\pi/180/35) \times d$ . Regardless of such a deficiency, the Examiner submits that it would have been well within the ordinary level of skill to the display device designer to incorporate known values in the design of the Liang et al. device. The Applicant has not shown how said ranges provide any unexpected or critical results, and it appears the prior art would have worked equally well when implemented using the claimed ranges. It has been held that where claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists. See *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) or *In re Woodruff*, 919 F.2d 1575, 16 USPQ 1934 (Fed. Cir. 1990). Thus, the Examiner submits those of ordinary skill with the knowledge of the Liang et al. device would have found the claimed ranges to overlap those known in the art and therefore, those skilled in the display arts would have expected the claimed ranges to have the same properties. Further, having a pitch value that satisfies the relation that  $P < \tan(\pi/180/35) \times d$  appears to be inherent to Liang et al. in view of the ranges and values discussed above. Clearly a game player would only be sitting within a reasonable distance  $d$  from the image device, and thus, the first and second pixel units. That is, the average player sits between 0.3-0.5 meters away from the image display device. The only factor that appears to effect the pitch  $p$  in the relationship described above is the distance  $d$ , and given such a distance is well known, common, and arguable inherent to a player playing the gaming machine having this image display device, clearly the pitch between the first and second pixel units would satisfy the claimed relationship. Therefore, it would have been obvious to those of ordinary skill in the art at the time the invention was made to modify Liang et al. with known values for pixels lines per degree and pitch (where the pitch satisfies the relationship discussed above) to achieve

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expected results with improved resolution due to a higher number of pixel lines per degree resulting in a better image at no cost, implementation of said values appear to produce predictable or expected results of increased resolution, which is common place when introducing these known values. Additionally, it appears no unexpected results arise from implementing the claimed ranges, thus, these ranges are deemed non-critical to patentability. See Also MPEP 2144.05 entitled "Obviousness of Ranges".

In regards to claims 13 & 14, the Examiner had previously deemed the claimed formula for determining a pitch value as a formula that appeared to mask common values for pitch. The claimed values of pixels per degree and pitch also appear common to the display arts and those of ordinary skill and common knowledge in the display arts would have found it obvious to try various values to achieve expected results. The results are deemed expected as each result can be precisely calculated given the test values implemented for the distance between the game player and the image display device (i.e. distance d or dp). Thus, if anticipated success is reached, it is likely the product is not of innovation, but ordinary skill and common sense. The Applicant is directed to the full explanation regarding the formula recited in claims 13 & 14 in the Final Office Action mailed September 14, 2006 at pages 2-5. The Examiner has clearly set forth a prima facie case of obviousness regarding the formula recited in claims 13 & 14.

**Claims 7 & 9:** Liang et al. disclose the pixels are arranged in a matrix in an "xy plane", and as seen in figures 3 or 5, the pixel electrodes of the same color are arranged in the y direction and the same pattern is continuously arranged in the x direction to form a stripe (figures 3 or 5).

**Claim 10:** Liang et al. disclose a possible intended use of the pixeling method is in a "highly transmissive" liquid crystal display (paragraph 0015; note "on a game board" is considered intended use).

**Claims 11 & 12:** Liang et al. disclose the pixel electrodes for the same color included in a pair of pixel units a and b respectively are connected on a one-to-two relationship (figures 4A and 4B show that each pixel units a and b are connected to the gate lines and transmission lines via a single connection for the both pixel units a and b, thus, the electrodes are connected on a one-to-two relationship).

### ***Response to Arguments***

As an initial matter, the Examiner respectfully submits that there are numerous discrepancies made throughout the Remarks filed March 13, 2008 that appear incorrect. For example, the Applicant indicates the rejection based on Liang et al. is a 35 U.S.C. 102(b) rejection, when in fact it is currently and was in the previous action a rejection based on 35 U.S.C. 103(a). The Applicant also indicates support for newly added language can be found at paragraph [0050] and [0056], which appears incorrect as neither one of these paragraphs provide support for the newly added limitations. Nonetheless, the Examiner does find support in the originally filed specification for the newly added language from different areas of the specification then indicated by the Applicant. Additional discrepancies may be presented as well.

Applicant's arguments filed March 13, 2008 have been fully considered but they are not persuasive. The updated rejection above includes any newly added language; thus, a response to arguments is included with the updated rejection above. Therefore, the Applicant is directed to the rejection of claims 6-14 as set forth above. Additionally, the only argument throughout Applicant's Remarks appears to be that Liang et al. fail to teach that the pitch  $P$  between the first and second pixel units and a distance  $d$  from the first and second pixel units satisfies a relationship of  $P < \tan(\pi/180/35) \times d$ . In analyzing this relationship, it appears the distance  $d$  is the only variable that affects the relationship. Thus, as described in the rejection above and as clear to those skilled in the art, a game player playing a gaming machine having the claimed image display device would inherently be seated within a reasonable distance  $d$  from the image display device,

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such as 0.3-0.5 meters (based on the average person. The pitch values by evaluating the formula using 0.3-0.5m as the distance  $d$  would produce pitch values between the range of 0.075 mm and 1.396 mm as claimed. Therefore, there appears to be no patentable significance to the claimed values or formulas.

Consequently, the Applicant is kindly invited to file explicit evidence to show criticality of any of the recited values, ranges, or formulas to show unexpected results, as currently, the Examiner concludes that no unexpected results are obtained from the numerous common values in the image display arts implemented in the claimed invention.

For at least these reasons, the rejections of all claims are maintained or updated herein.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Milap Shah whose telephone number is (571)272-1723. The examiner can normally be reached on M-F: 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert E Pezzuto/  
Supervisory Patent Examiner, Art Unit 3714

/MBS/